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**Amendments to the Claims:** This listing of the claims below will replace all prior versions and listing of claims in this application.

**Listing of Claims:**

Claims 1-3143 (Canceled).

Claim 3144. (Currently Amended) A non-porous solid support comprising one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein at least one single-stranded nucleic acid is directly or indirectly fixed or immobilized thereto in hybridizable form to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s). ~~wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.~~

Claim 3145. (Currently Amended) A non-porous solid support comprising one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein at least one double-stranded nucleic acid is fixed or immobilized thereto, to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s), and wherein at least one nucleic acid strand of said at least one double-stranded nucleic acid has covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently attached to a non-radioactive signaling moiety.

~~comprises at least one non-radioactive chemical label which is quantifiable or detectable, wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.~~

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Claim 3146. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3144, ~~or~~ 3145, 3287, 3324 or 3325, wherein said non-porous solid support  
comprises glass or plastic.

Claim 3147. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3144, ~~or~~ 3145, 3287, 3324 or 3325, wherein said non-porous solid support  
comprises a plate or plates, a well or wells, a microtiter well or microtiter wells, a  
depression or depressions, a tube or tubes, a cuvette or cuvettes, or a bead or  
beads, ~~or a set of said plates, wells, depressions, tubes, cuvettes or beads.~~

Claim 3148-3149. (Canceled).

Claim 3150. (Currently Amended) The non-porous solid support of claim 3287 or  
3325 ~~3149~~, wherein said reactive sites ~~or binding sites~~ comprising ~~comprise~~ one  
or more amines, ~~hydroxyls or epoxides~~.

Claim 3151. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3144, ~~or~~ 3145, 3287, 3324 or 3325, wherein said non-porous solid support has  
been treated with a surface treatment agent, a blocking agent, or both.

Claim 3152. (Previously Presented) The non-porous solid support of claim 3151,  
wherein said surface treatment agent comprises an amine providing compound, an  
epoxy glue or solution, an acid solution, or ammonium acetate.

Claim 3153. (Previously Presented) The non-porous solid support of claim 3151,  
wherein said blocking agent comprises Denhardt's solution.

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Claim 3154. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3144, ~~or~~ 3145, 3287, 3324 or 3325, wherein said ~~direct or indirect~~ fixation or  
immobilization to said non-porous solid support is covalent.

Claim 3155. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3144, ~~or~~ 3145, 3287, 3324 or 3325, wherein said ~~direct or indirect~~ fixation or  
immobilization to said non-porous solid support is non-covalent.

Claim 3156. (Canceled).

Claim 3157. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3145, 3287 or 3325, wherein one strand of said at least one double-stranded  
nucleic acid is ~~indirectly~~ fixed or immobilized to said non-porous solid support ~~by~~  
~~sandwich hybridization or by hybridization to a complementary and the other~~  
~~nucleic acid strand of said at least one double-stranded nucleic acid is hybridized to~~  
said one strand.

Claim 3158. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3144 or 3324, wherein said nucleic acid ~~comprises~~ is DNA ~~or~~ RNA.

Claim 3159. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3145, 3287 or 3325, wherein said nucleic acid ~~comprises~~ is DNA, RNA ~~or both~~.

Claim 3160. (Previously Presented) The non-porous solid support of claim 3144,  
wherein said nucleic acid comprises a nucleic acid sequence complementary to a  
nucleic acid sequence of interest sought to be identified, quantified or sequenced.

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Claim 3161. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3145 or 3287, wherein one strand of said at least one double-stranded nucleic acid  
comprises a nucleic acid sequence of interest sought to be identified, quantified or  
sequenced.

Claim 3162. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3144 or 3324, wherein said single-stranded nucleic acid is unlabeled.

Claim 3163. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3144, or 3145, 3287, 3324 or 3325, wherein said non-porous solid support is  
transparent or translucent.

Claim 3164. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3145 or 3287, wherein said ~~non-radioactive-chemical-label~~ non-radioactive  
signaling moiety is quantifiable in or from a fluid or solution, said quantity being  
proportional to the amount or quantity of said ~~label or labels~~ non-radioactive  
signaling moiety.

Claim 3165. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3145 or 3287, wherein said non-porous solid support is transparent or translucent,  
and said ~~non-radioactive-chemical-label~~ non-radioactive signaling moiety is  
quantifiable in or from a fluid or solution or ~~in or through~~ from said non-porous solid  
support, said quantity being proportional to the amount or quantity of said ~~label or~~  
~~labels~~ non-radioactive signaling moiety.

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Claim 3166. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3145, 3287 or 3325, wherein said ~~non-radioactive chemical label~~ non-radioactive  
signaling moiety comprises a chromagen or a chromagenic compound, ~~a colored~~  
~~dye compound, a fluorogen or a fluorescent compound, a chemiluminescent~~  
~~compound, a chelating compound, an enzyme or an enzymatic compound, a~~  
~~coenzyme, or biotin, iminobiotin, a hapten or a ligand.~~

Claim 3167. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3145, 3287 or 3325, wherein a non-radioactive signal from said ~~non-radioactive~~  
~~chemical label~~ non-radioactive signaling moiety is quantifiable or detectable by  
photometric techniques, ~~spectrophotometric techniques, colorimetric techniques,~~  
~~fluorometric techniques or chemiluminescent techniques.~~

Claim 3168. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3144 or 3324, comprising more than one single-stranded nucleic acid.

Claim 3169. (Currently Amended) The non-porous solid support of ~~claim~~ claims  
3145, 3287 or 3325, comprising more than one double-stranded nucleic acid.

Claims 3170 - 3171 (Canceled).

Claim 3172. (Currently Amended) A system comprising a non-porous solid  
support which comprises one or more amine(s), hydroxyl(s) or epoxide(s) thereon,  
wherein and at least one single-stranded nucleic acid is directly or indirectly fixed or  
immobilized thereto in hybridizable form to said non-porous solid support via said  
one or more amine(s), hydroxyl(s) or epoxide(s). ~~wherein when said nucleic acid is~~  
~~indirectly fixed or immobilized to said non-porous solid support, said indirect~~  
~~fixation or immobilization is not to a cell fixed in situ to said non-porous solid~~  
~~support.~~

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Claim 3173. (Currently Amended) A system comprising a non-porous solid support which comprises one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein and at least one double-stranded nucleic acid is fixed or immobilized thereto, to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s), and wherein at least one nucleic acid strand of said double-stranded nucleic acid has covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently attached to a non-radioactive signaling moiety.

~~comprises at least one non-radioactive chemical label which is quantifiable or detectable, and wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed in situ to said non-porous solid support.~~

Claim 3174. (Currently Amended) The system of ~~claim~~ claims 3172, or 3173, 3279, 3280, 3281 or 3282, wherein said non-porous solid support comprises glass or plastic.

Claim 3175. (Currently Amended) The system of ~~claim~~ claims 3172, or 3173, 3279, 3280, 3281 or 3282, wherein said non-porous solid support comprises a plate or plates, a well or wells, a microtiter well or microtiter wells, a depression or depressions, a tube or tubes, a cuvette or cuvettes, or a bead or beads, or a set of ~~said plates, wells, depressions, tubes, cuvettes or beads.~~

Claims 3176-3178. (Canceled).

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Claim 3179. (Currently Amended) The system of ~~claim~~ claims 3172, ~~or~~ 3173, 3279, 3280, 3281 or 3282, wherein said non-porous solid support has been treated with a surface treatment agent, a blocking agent, or both.

Claim 3180. (Previously Presented) The system of claim 3179, wherein said surface treatment agent comprises an amine providing compound, an epoxy glue or solution, an acid solution or ammonium acetate.

Claim 3181. (Previously Presented) The system of claim 3179, wherein said blocking agent comprises Denhardt's solution.

Claim 3182. (Currently Amended) The system of ~~claim~~ claims 3172, ~~or~~ 3173, 3279, 3280, 3281 or 3282, wherein said ~~direct or indirect~~ fixation or immobilization to said non-porous solid support is covalent.

Claim 3183. (Currently Amended) The system of ~~claim~~ claims 3172, ~~or~~ 3173, 3279, 3280, 3281 or 3282, wherein said ~~direct or indirect~~ fixation or immobilization to said non-porous solid support is non-covalent.

Claim 3184. (Canceled).

Claim 3185. (Currently Amended) The system of ~~claim~~ claims 3173, 3281 or 3282, wherein ~~said~~ one strand of said double-stranded nucleic acid is ~~indirectly~~ fixed or immobilized to said non-porous solid support ~~by sandwich hybridization or by hybridization to a complementary~~ and the other nucleic acid strand of said double-stranded nucleic acid is hybridized to said one strand.

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Claim 3186. (Currently Amended) The system of ~~claim~~ claims 3172 or 3280,  
wherein said nucleic acid is ~~comprises-DNA or RNA~~.

Claim 3187. (Currently Amended) The system of ~~claim~~ claims 3173, 3281 or  
3282, wherein said nucleic acid is ~~comprises-DNA, RNA, or both~~.

Claim 3188. (Previously Presented) The system of claim 3172, wherein said  
nucleic acid comprises a nucleic acid sequence complementary to a nucleic acid  
sequence of interest sought to be identified, quantified or sequenced.

Claim 3189. (Currently Amended) The system of ~~claim~~ claims 3173 or 3288,  
wherein one strand of said at least one double-stranded nucleic acid comprises a  
nucleic acid sequence of interest sought to be identified, quantified or sequenced.

Claim 3190. (Previously Presented) The system of claim 3172, wherein said  
single-stranded nucleic acid is unlabeled.

Claim 3191. (Currently Amended) The system of ~~claim~~ claims 3172, or 3173,  
3279, 3280, 3281 or 3282, wherein said non-porous solid support is transparent  
or translucent.

Claim 3192. (Currently Amended) The system of ~~claim~~ claims 3173 or 3288,  
wherein said ~~non-radioactive chemical label~~ non-radioactive signaling moiety is  
quantifiable in or from a fluid or solution, said quantity being proportional to the  
amount or quantity of said ~~label or labels~~ non-radioactive signaling moiety.

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Claim 3193. (Currently Amended) The system of ~~claim~~ claims 3173 or 3288, wherein said non-porous solid support is transparent or translucent, and said ~~non-radioactive chemical label~~ non-radioactive signaling moiety is quantifiable in or from a fluid or solution or ~~in or through~~ from said non-porous solid support, said quantity being proportional to the amount or quantity of said ~~label or labels~~ non-radioactive signaling moiety.

Claim 3194. (Currently Amended) The system of ~~claim~~ claims 3173, 3281 or 3282, wherein said ~~non-radioactive chemical label~~ non-radioactive signaling moiety comprises a chromagen or a chromagenic compound, ~~a colored dye compound, a fluorogen or a fluorescent compound, a chemiluminescent compound, a chelating compound, an enzyme or an enzymatic compound, a coenzyme, or biotin,~~ iminobiotin, ~~a hapten or a ligand.~~

Claim 3195. (Currently Amended) The system of ~~claim~~ claims 3173, 3281 or 3282, wherein a non-radioactive signal from said ~~non-radioactive chemical label~~ non-radioactive signaling moiety is quantifiable or detectable by photometric techniques, ~~spectrophotometric techniques, colorimetric techniques, fluorometric techniques or chemiluminescent techniques.~~

Claim 3196. (Previously Presented) The system of claim 3172, comprising more than one single-stranded nucleic acid.

Claim 3197. (Currently Amended) The system of ~~claim~~ claims 3173, 3281 or 3282, comprising more than one double-stranded nucleic acid.

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Claim 3198. (Currently Amended) An array comprising various single-stranded nucleic acids ~~directly or indirectly~~ fixed or immobilized in hybridizable form to a non-porous solid support, ~~wherein when said nucleic acids are indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.~~

Claim 3199. (Currently Amended) An array comprising various double-stranded nucleic acids ~~directly or indirectly~~ fixed or immobilized to a non-porous solid support, wherein at least one nucleic acid strand of said various double-stranded nucleic acids comprises at least one non-radioactive chemical label signaling moiety which is quantifiable or detectable, ~~and wherein when said nucleic acids are indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.~~

Claim 3200. (Currently Amended) The array of ~~claim~~ claims 3198, or 3199, 3300, 3301, 3326 or 3327, wherein said non-porous solid support comprises glass or plastic.

Claim 3201. (Currently Amended) The array of ~~claim~~ claims 3198, or 3199, 3300, 3301, 3326 or 3327, wherein said non-porous solid support comprises a plate or plates, a well or wells, a microtiter well or microtiter wells, a depression or depressions, a tube or tubes, a cuvette or cuvettes, or a bead or beads, or a set of ~~said plates, wells, depressions, tubes, cuvettes or beads.~~

Claim 3202 -3203. (Canceled).

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Claim 3204. (Currently Amended) The array of claims 3198, 3199, 3300, 3301, 3326 3327 ~~claim 3203, wherein said reactive sites or binding sites comprise~~  
~~comprising one or more amines, hydroxyls or epoxides.~~

Claim 3205. (Currently Amended) The array of ~~claim~~ claims 3198, or 3199, 3300, 3301, 3326 or 3327, wherein said non-porous solid support has been treated with a surface treatment agent, a blocking agent, or both.

Claim 3206. (Previously Presented) The array of claim 3205, wherein said surface treatment agent comprises an amine providing compound, an epoxy glue or solution, an acid solution or ammonium acetate.

Claim 3207. (Previously Presented) The array of claim 3205, wherein said blocking agent comprises Denhardt's solution.

Claim 3208. (Currently Amended) The array of ~~claim~~ claims 3198, or 3199, 3300, 3301, 3326 or 3327, wherein said ~~direct or indirect~~ fixation or immobilization to said non-porous solid support is covalent.

Claim 3209. (Currently Amended) The array of ~~claim~~ claims 3198, or 3199, 3300, 3301, 3326 or 3327, wherein said ~~direct or indirect~~ fixation or immobilization to said non-porous solid support is non-covalent.

Claim 3210. (Canceled).

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Claim 3211. (Currently Amended) The array of ~~claim~~ claims 3199 or 3301, wherein ~~one strand~~ the first strands of said double-stranded nucleic acids ~~or sequences is~~ are indirectly fixed or immobilized to said non-porous solid support ~~by sandwich hybridization or by hybridization to complementary and the other nucleic acid strands of said double-stranded nucleic acids are hybridized to said first strands.~~

Claim 3212. (Currently Amended) The array of ~~claim~~ claims 3198 or 3300, wherein said nucleic acids is ~~comprise~~ DNA ~~or RNA~~.

Claim 3213. (Currently Amended) The array of ~~claim~~ claims 3199 or 3301, wherein said nucleic acids is ~~comprise~~ DNA, RNA, ~~or both~~.

Claim 3214. (Currently Amended) The array of ~~claim~~ claims 3198 or 3289, wherein said nucleic acids comprise nucleic acid sequences complementary to nucleic acid sequences of interest sought to be identified, quantified or sequenced.

Claim 3215. (Currently Amended) The array of ~~claim~~ claims 3199 or 3290, wherein one strand of said double-stranded nucleic acids comprises a nucleic acid sequence of interest sought to be identified, quantified or sequenced.

Claim 3216. (Currently Amended) The array of ~~claim~~ claims 3198 or 3300, wherein said single-stranded nucleic acids are unlabeled.

Claim 3217. (Currently Amended) The array of ~~claim~~ claims 3198, or 3199, 3300, 3301, 3326 or 3327, wherein said non-porous solid support is transparent or translucent.

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Claim 3218. (Currently Amended) The array of ~~claim~~ claims 3199 or 3290, wherein said non-radioactive ~~chemical-label~~ signaling moiety is quantifiable in or from a fluid or solution, said quantity being proportional to the amount or quantity of said label or labels.

Claim 3219. (Currently Amended) The array of ~~claim~~ claims 3199 or 3290, wherein said non-porous solid support is transparent or translucent, and said non-radioactive ~~chemical-label~~ signaling moiety is quantifiable in or from a fluid or solution or ~~in or through~~ from said non-porous solid support, said quantity being proportional to the amount or quantity of said ~~label or labels~~ non-radioactive signaling moiety.

Claim 3220. (Currently Amended) The array of ~~claim~~ claims 3199, 3301, 3326 or 3327, wherein said non-radioactive ~~chemical-label~~ signaling moiety comprises a chromagen or a chromagenic compound, ~~a colored dye compound, a fluorogen or a fluorescent compound, a chemiluminescent compound, a chelating compound, an enzyme or an enzymatic compound, a coenzyme, or biotin, iminobiotin, a hapten or a ligand.~~

Claim 3221. (Currently Amended) The array of ~~claim~~ claims 3199, 3301, 3326 or 3327, wherein a non-radioactive signal from said non-radioactive ~~chemical-label~~ signaling moiety is quantifiable or detectable by photometric techniques, ~~spectrophotometric techniques, colorimetric techniques, fluorometric techniques or chemiluminescent techniques.~~

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Claim 3222. (Currently Amended) An array comprising various single-stranded nucleic acids ~~directly or indirectly~~ fixed or immobilized in hybridizable form to a non-porous solid support having wells or depressions, ~~wherein when said nucleic acids are indirectly fixed or immobilized to said wells or depressions of said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said wells or depressions of said non-porous solid support.~~

Claim 3223. (Currently Amended) An array comprising various double-stranded nucleic acids ~~directly or indirectly~~ fixed or immobilized to a non-porous solid support having wells or depressions, wherein at least one nucleic acid strand of each of said various double-stranded nucleic acids comprises at least one non-radioactive chemical label signaling moiety which is quantifiable or detectable, ~~and wherein when said nucleic acids are indirectly fixed or immobilized to said wells or depressions of said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said wells or depressions of said non-porous solid support.~~

Claim 3224. (Currently Amended) The array of claim 3222 or 3223, wherein said non-porous solid support comprises glass or plastic.

Claim 3225 - 3226. (Canceled).

Claim 3227. (Currently Amended) The array of claims 3222 or 3223 ~~claim 3226~~, ~~wherein said reactive sites or binding sites comprise~~ wherein said non-porous solid support comprises one or more amines, ~~hydroxyls or epoxides.~~

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Claim 3228. (Currently Amended) The array of ~~claim~~ claims 3222 or 3223, wherein said non-porous solid support has been treated with a surface treatment agent, a blocking agent, or both.

Claim 3229. (Previously Presented) The array of claim 3228, wherein said surface treatment agent comprises an amine providing compound, an epoxy glue or solution, an acid solution or ammonium acetate.

Claim 3230. (Previously Presented) The array of claim 3228, wherein said blocking agent comprises Denhardt's solution.

Claim 3231. (Currently Amended) The array of ~~claim~~ claims 3222 or 3223, wherein said ~~direct or indirect~~ fixation or immobilization to said non-porous solid support is covalent.

Claim 3232. (Currently Amended) The array of ~~claim~~ claims 3222 or 3223, wherein said ~~direct or indirect~~ fixation or immobilization to said non-porous solid support is non-covalent.

Claim 3233. (Canceled).

Claim 3234. (Currently Amended) The array of claim 3223, wherein ~~one strand~~ the first strands of said double-stranded nucleic acids ~~is indirectly~~ are fixed or immobilized to said non-porous solid support ~~by sandwich hybridization or by hybridization to complementary and the other~~ by hybridization to complementary and the other nucleic acid strands of said double-stranded nucleic acids are hybridized to said first strands.

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Claim 3235. (Currently Amended) The array of claim 3222, wherein said nucleic acids are DNA, ~~comprise DNA or RNA.~~

Claim 3236. (Currently Amended) The array of claim 3223, wherein said nucleic acids are DNA, ~~comprise DNA, RNA, or both.~~

Claim 3237. (Currently Amended) The array of claim 3222, wherein said nucleic acids comprise a gene sequence or pathogen sequence ~~nucleic acid sequences complementary to nucleic acid sequences of interest sought to be identified, quantified or sequenced.~~

Claim 3238. (Currently Amended) The array of claim 3223, wherein one strand of said double-stranded nucleic acids comprises a gene sequence or pathogen sequence ~~a nucleic acid sequence of interest sought to be identified, quantified or sequenced.~~

Claim 3239. (Canceled).

Claim 3240. (Previously Presented) The array of claim 3222, wherein said single-stranded nucleic acids are unlabeled.

Claim 3241. (Currently Amended) The array of ~~claim~~ claims 3222 or 3223, wherein said non-porous solid support is transparent or translucent.

Claim 3242. (Currently Amended) The array of claim 3223, wherein said non-radioactive ~~chemical label~~ signaling moiety is quantifiable in or from a fluid or solution, said quantity being proportional to the amount or quantity of said ~~label or labels~~ non-radioactive signaling moiety.

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Stavrianopoulos et al., U.S. Pat. Appl. Ser. No. 08/486,070 (Filed June 7, 1995)

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Claim 3243. (Currently Amended) The array of claim 3223, wherein said non-porous solid support is transparent or translucent, and said non-radioactive chemical-label signaling moiety is quantifiable in or from a fluid or solution or ~~in or~~ through from said non-porous solid support, said quantity being proportional to the amount or quantity of said ~~label or labels~~ non-radioactive signaling moiety.

Claim 3244. (Currently Amended) The array of claim 3223, wherein said non-radioactive chemical-label signaling moiety comprises a chromagen or a chromagenic compound, ~~a colored dye compound, a fluorogen or a fluorescent compound, a chemiluminescent compound, a chelating compound, an enzyme or an enzymatic compound, a coenzyme, biotin, iminobiotin, a hapten or a ligand.~~

Claim 3245. (Currently Amended) The array of claim 3223, wherein a non-radioactive signal from said non-radioactive chemical-label signaling moiety is quantifiable or detectable by photometric techniques, ~~spectrophotometric techniques, colorimetric techniques, fluorometric techniques or chemiluminescent techniques.~~

Claim 3246. (Currently Amended) A non-porous glass or non-porous plastic solid support comprising one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein at least one single-stranded nucleic acid is directly or indirectly fixed or immobilized thereto in hybridizable form to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s), ~~wherein when said single stranded nucleic acid is indirectly fixed or immobilized to said non-porous glass or plastic solid support, said indirect fixation or immobilization is not to a cell fixed in situ to said non-porous glass or plastic solid support.~~

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Claim 3247. (Currently Amended) A non-porous glass or non-porous plastic solid support comprising one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein at least one double-stranded nucleic acid ~~is directly or indirectly fixed or immobilized thereto, to said non-porous glass or non-porous plastic solid support via said one or more amine(s), hydroxyl(s) or epoxide(s), and~~ wherein at least one nucleic acid strand of said double-stranded nucleic acid has covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently attached to a non-radioactive signaling moiety

~~comprises at least one non-radioactive chemical label which is quantifiable or detectable, and wherein when said double-stranded nucleic acid is indirectly fixed or immobilized to said non-porous glass or plastic solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous glass or plastic solid support.~~

Claim 3248. (Currently Amended) The non-porous glass or non-porous plastic solid support of ~~claim~~ claims 3246 or 3247, wherein said non-porous glass or non-porous plastic solid support comprises a plate or plates, a well or wells, a microtiter well or microtiter wells, a depression or depressions, a tube or tubes, a cuvette or cuvettes, or a bead or beads, ~~or a set of said plates, wells, depressions, tubes, cuvettes or beads.~~

Claims 3249-3251. (Canceled).

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Claim 3252. (Currently Amended) The non-porous glass or non-porous plastic solid support of ~~claim~~ claims 3246 or 3247, wherein said non-porous glass or non-porous plastic solid support has been treated with a surface treatment agent, a blocking agent, or both.

Claim 3253. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3252, wherein said surface treatment agent comprises an amine providing compound, an epoxy glue or solution, an acid solution or ammonium acetate.

Claim 3254. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3252, wherein said blocking agent comprises Denhardt's solution.

Claim 3255. (Currently Amended) The non-porous glass or non-porous plastic solid support of ~~claim~~ claims 3246 or 3247, wherein said ~~direct or indirect~~ fixation or immobilization to said non-porous glass or non-porous plastic solid support is covalent.

Claim 3256. (Currently Amended) The non-porous glass or non-porous plastic solid support of ~~claim~~ claims 3246 or 3247, wherein said ~~direct or indirect~~ fixation or immobilization to said non-porous glass or non-porous plastic solid support is non-covalent.

Claim 3257. (Canceled).

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Claim 3258. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3247, wherein one strand of said double-stranded nucleic acid is indirectly fixed or immobilized to said non-porous glass or non-porous plastic solid support by sandwich hybridization or by hybridization to a complementary nucleic acid strand or sequence.

Claim 3259. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3246, wherein said nucleic acid ~~or sequence comprises~~ is DNA ~~or RNA~~.

Claim 3260. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said nucleic acid ~~or sequence~~ is comprises DNA, RNA, ~~or both~~.

Claim 3261. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3246, wherein said nucleic acid comprises a nucleic acid sequence complementary to a nucleic acid sequence of interest sought to be identified, quantified or sequenced.

Claim 3262. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3247, wherein one strand of said at least one double-stranded nucleic acid comprises a nucleic acid sequence of interest sought to be identified, quantified or sequenced.

Claim 3263. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3246, wherein said single-stranded nucleic acid is unlabeled.

Claim 3264. (Currently Amended) The non-porous glass or non-porous plastic solid support of ~~claim~~ claims 3246 or 3247, wherein said non-porous glass or non-porous plastic solid support is transparent or translucent.

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Claim 3265. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-radioactive ~~chemical-label~~ signaling moiety is quantifiable in or from a fluid or solution, said quantity being proportional to the amount or quantity of said label or labels.

Claim 3266. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-porous glass or non-porous plastic solid support is transparent or translucent, and non-radioactive ~~chemical-label~~ signaling moiety is quantifiable in or from a fluid or solution or ~~in or through~~ from said non-porous glass or non-porous plastic solid support, said quantity being proportional to the amount or quantity of said ~~label or labels~~ non-radioactive signaling moiety.

Claim 3267. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3246, comprising more than one single-stranded nucleic acid ~~acids directly or indirectly~~ fixed or immobilized in hybridizable form to said non-porous glass or non-porous plastic solid support.

Claim 3268. (Currently Amended) The non-porous glass or non-porous plastic solid support of claim 3247, comprising more than one double-stranded nucleic acid ~~acids directly or indirectly~~ fixed or immobilized in hybridizable form to said non-porous glass or non-porous plastic solid support.

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Claim 3269-3270. (Canceled).

Claim 3271. (Currently Amended) A non-porous solid support comprising one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein single-stranded nucleic acid is directly or indirectly fixed or immobilized thereto in hybridizable form to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s), ~~wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.~~

Claim 3272. (Currently Amended) A non-porous solid support comprising one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein a single-stranded nucleic acid is directly or indirectly fixed or immobilized thereto, in hybridizable form to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s), ~~wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.~~

Claim 3273. (Currently Amended) A non-porous solid support comprising one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein nucleic acid is directly or indirectly fixed or immobilized thereto in hybridizable form to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s), ~~wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.~~

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Claim 3274. (Currently Amended) A non-porous solid support comprising one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein DNA or RNA is directly or indirectly fixed or immobilized thereto in hybridizable form to said non-porous solid support via said one or more amine(s), hydroxyl(s). ~~wherein when said DNA or RNA is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.~~

Claim 3275. (Currently Amended) A non-porous solid support comprising double-stranded nucleic acid fixed or immobilized thereto, wherein ~~at least one nucleic acid strand of said double-stranded nucleic acid~~ has covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently attached to a non-radioactive signaling moiety.

~~comprises at least one non-radioactive chemical label which is quantifiable or detectable,~~ wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

Enz-7(P)(C3)

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Claim 3276. (Currently Amended) A non-porous solid support comprising a double-stranded nucleic acid fixed or immobilized thereto, wherein at least one nucleic acid strand of said double-stranded nucleic acid has covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently attached to a non-radioactive signaling moiety.

~~comprises at least one non-radioactive chemical label which is quantifiable or detectable,~~ wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

Claim 3277. (Currently Amended) The non-porous solid support of claim ~~claims~~ 3271, 3272, 3273, 3274, 3275, or 3276, wherein said non-porous solid support comprises glass or plastic.

Claim 3278. (Canceled).

Claim 3279. (Currently Amended) A system comprising a non-porous solid support which comprises one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein ~~and~~ DNA or RNA ~~is directly or indirectly~~ fixed or immobilized thereto in hybridizable form to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s). ~~wherein when said DNA or RNA is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed in situ to said non-porous solid support.~~

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Claim 3280. (Currently Amended) A system comprising a non-porous solid support which comprises one or more amine(s), hydroxyl(s) or epoxide(s) thereon, wherein and nucleic acid is directly or indirectly fixed or immobilized thereto in hybridizable form to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s). ~~wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed in situ to said non-porous solid support.~~

Claim 3281. (Currently Amended) A system comprising a non-porous solid support which comprises ~~and~~ double-stranded nucleic acid fixed or immobilized thereto, wherein ~~at least~~ one nucleic acid strand of said double-stranded nucleic acid has covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently  
attached to a non-radioactive signaling moiety,

~~comprises at least one non-radioactive chemical label which is quantifiable or detectable,~~ and wherein ~~when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support,~~ said ~~indirect~~ fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

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Page 28 [Amendment Under 37 C.F.R. §1.115 (In Response To The  
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Claim 3282. (Currently Amended) A system comprising a non-porous solid support which comprises ~~and~~ a double-stranded nucleic acid fixed or immobilized thereto, wherein ~~at least~~ one nucleic acid strand of said double-stranded nucleic acid has covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently attached to a non-radioactive signaling moiety.

~~comprises at least one non-radioactive chemical label which is quantifiable or detectable, and wherein when said nucleic acid is indirectly fixed or immobilized to said non-porous solid support, said indirect fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.~~

Claim 3283. (Currently Amended) The system of ~~claim~~ claims 3279, 3280, 3281 or 3282, wherein said non-porous solid support comprises glass or plastic.

Claims 3284-3286. (Canceled).

Claim 3287. (New) A non-porous solid support comprising at least one double-stranded nucleic acid fixed or immobilized thereto, wherein one nucleic acid strand of said at least one double-stranded nucleic acid has covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently attached to a non-radioactive signaling moiety,

and wherein said fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

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Claim 3288. (New) The non-porous solid support of claims 3144, 3145, 3271, 3272, 3273, 3274 or 3324, wherein said fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

Claim 3289. (New) The non-porous solid support of claims 3144, 3145, 3271, 3272, 3273, 3274, 3287, 3324 or 3325, wherein said non-porous solid support comprises an arrangement of wells, tubes or cuvettes.

Claim 3290. (New) The non-porous solid support of claim 3152, wherein said amine providing compound comprises dodecadiamine (DDA), polylysine (PPL) or 6-aminohexane.

Claim 3291. (New) The non-porous solid support of claim 3152, wherein said acid compound comprises nitric acid.

Claim 3292. (New) The non-porous solid support of claims 3145, 3275, 3276, 3287 or 3325, wherein said bridging moiety comprises biotin-avidin, biotin-streptavidin or sugar-lectin.

Claim 3293. (New) The non-porous solid support of claims 3145, 3275, 3276, 3287 or 3325, wherein one strand of said at least one double-stranded nucleic acid is fixed or immobilized to said non-porous solid support by sandwich hybridization.

Claim 3294. (New) The system of claims 3172, 3173, 3279 or 3280, wherein said fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

Enz-7(P)(C3)

Stavrianopoulos et al., U.S. Pat. Appl. Ser. No. 08/486,070 (Filed June 7, 1995)

Page 30 [Amendment Under 37 C.F.R. §1.115 (In Response To The  
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Claim 3295. (New) The system of claims 3172, 3173, 3279, 3280, 3281 or 3282, wherein said non-porous solid support comprises an arrangement of wells, tubes or cuvettes.

Claim 3296. (New) The system of claim 3180, wherein said amine providing compound comprises dodecadiamine (DDA), polylysine (PPL) or 6-aminohexane.

Claim 3297. (New) The system of claim 3180, wherein said acid compound comprises nitric acid.

Claim 3298. (New) The system of claim 3173, wherein said bridging moiety comprises biotin-avidin, biotin-streptavidin or sugar-lectin.

Claim 3299. (New) The system of claims 3173, 3281 or 3282, wherein one strand of said double-stranded nucleic acid is fixed or immobilized to said non-porous solid support and the other strand of said double-stranded nucleic acid is hybridized to said one strand.

Claim 3300. (New) An array comprising single-stranded nucleic acids fixed or immobilized in hybridizable form to a non-porous solid support.

Claim 3301. (New) An array comprising double-stranded nucleic acids fixed or immobilized to a non-porous solid support, wherein at least one nucleic acid strand of said double-stranded nucleic acids comprises at least one non-radioactive signaling moiety which is quantifiable or detectable.

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Stavrianopoulos et al., U.S. Pat. Appl. Ser. No. 08/486,070 (Filed June 7, 1995)

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Claim 3302. (New) The array of claims 3198, 3199, 3300, 3301, 3326 or 3327, wherein said fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

Claim 3303. (New) The array of claims 3198, 3199, 3300, 3301, 3326 or 3327, wherein said non-porous solid support comprises an arrangement of wells, tubes or cuvettes.

Claim 3304. (New) The array of claim 3206, wherein said amine providing compound comprises dodecadiamine (DDA), polylysine (PPL) or 6-aminohexane.

Claim 3305. (New) The array of claim 3206, wherein said acid compound comprises nitric acid.

Claim 3306. (New) The array of claims 3199, 3301, 3326 or 3327, wherein said non-radioactive signaling moiety is attached to said at least one nucleic acid strand through a bridging moiety.

Claim 3307. (New) The array of claim 3306, wherein said bridging moiety comprises biotin-avidin, biotin-streptavidin or sugar-lectin.

Claim 3308. (New) The array of claims 3199 or 3301, wherein the first strands of said double-stranded nucleic acids are fixed or immobilized to said non-porous solid support and the other nucleic acid strands of said double-stranded nucleic acids are hybridized to said first strands.

Enz-7(P)(C3)

Stavrianopoulos et al., U.S. Pat. Appl. Ser. No. 08/486,070 (Filed June 7, 1995)

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Claim 3309. (New) The array of claims 3199 or 3301, wherein one strand of said at least one double-stranded nucleic acid is fixed or immobilized to said non-porous solid support by sandwich hybridization.

Claim 3310. (New) The array of claims 3222 or 3223, wherein said fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

Claim 3311. (New) The array of claims 3222 or 3223, wherein said non-porous solid support comprises an arrangement of said wells.

Claim 3312. (New) The array of claim 3229, wherein said amine providing compound comprises dodecadiamine (DDA), polylysine (PPL) or 6-aminohexane.

Claim 3313. (New) The array of claim 3229, wherein said acid compound comprises nitric acid.

Claim 3314. (New) The array of claim 3223, wherein said at least one non-radioactive signaling moiety is attached to said at least one nucleic acid strand through a bridging moiety.

Claim 3315. (New) The array of claim 3314, wherein said bridging moiety comprises biotin-avidin, biotin-streptavidin or sugar-lectin.

Claim 3316. (New) The array of claim 3223, wherein one strand of various double-stranded nucleic acids is fixed or immobilized to said non-porous solid support by sandwich hybridization.

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Claim 3317. (New) The non-porous glass or non-porous plastic solid support of claims 3246 or 3247, wherein said fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

Claim 3318. (New) The non-porous glass or non-porous plastic solid support of claims 3246 or 3247, wherein said non-porous solid support comprises an arrangement of wells, tubes or cuvettes.

Claim 3319. (New) The non-porous glass or non-porous plastic solid support of claim 3253, wherein said amine providing compound comprises dodecadiamine (DDA), polylysine (PPL) or 6-aminohexane.

Claim 3320. (New) The non-porous glass or non-porous plastic solid support of claim 3253, wherein said acid compound comprises nitric acid.

Claim 3321. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said bridging moiety comprises biotin-avidin, biotin-streptavidin or sugar-lectin.

Claim 3322. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-radioactive signaling moiety comprises a chromagen or a chromagenic compound.

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Stavrianopoulos et al., U.S. Pat. Appl. Ser. No. 08/486,070 (Filed June 7, 1995)

Page 34 [Amendment Under 37 C.F.R. §1.115 (In Response To The  
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Claim 3323. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein one strand of said at least one double-stranded nucleic acid is fixed or immobilized to said non-porous solid support by sandwich hybridization.

Claim 3324. (New) A non-porous solid support comprising one or more amine(s), hydroxyl(s) or epoxide(s) thereon, and at least one nucleic acid strand or sequence fixed or immobilized to said non-porous solid support via said one or more amine(s), hydroxyl(s) or epoxide(s), and wherein another nucleic acid strand or sequence is hybridized to said at least one nucleic acid strand or sequence, said another nucleic acid strand or sequence having covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently attached to a non-radioactive signaling moiety.

Claim 3325. (New) A non-porous solid support comprising at least one nucleic acid strand or sequence fixed or immobilized to said non-porous solid support, and wherein one other nucleic acid strand or sequence is hybridized to said at least one nucleic acid strand or sequence, said other nucleic acid strand or sequence having covalently attached thereto either:

- (i) a non-radioactive signaling moiety, or
- (ii) a non-radioactive bridging moiety covalently or non-covalently attached to a non-radioactive signaling moiety,

and wherein said fixation or immobilization is not to a cell fixed *in situ* to said non-porous solid support.

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Claim 3326. (New) An array comprising various nucleic acids, wherein single-stranded nucleic acids or sequences are fixed or immobilized to a non-porous solid support, and other single-stranded nucleic acids or sequences are hybridized to said fixed or immobilized single-stranded nucleic acids or sequences, said other nucleic acid strands or sequences comprising at least one non-radioactive signaling moiety which is quantifiable or detectable.

Claim 3327. (New) An array comprising various first single-stranded nucleic acids fixed or immobilized to a non-porous solid support, and further comprising second nucleic acids hybridized to said fixed or immobilized first nucleic acids, wherein said second nucleic acids comprise at least one non-radioactive signalling moiety which is quantifiable or detectable.

Claim 3328. (New) The non-porous solid support of claim 3287 or 3325, wherein said non-porous solid support comprises one or more hydroxyls.

Claim 3329. (New) The non-porous solid support of claim 3287 or 3325, wherein said non-porous solid support comprises one or more epoxides.

Claim 3330. (New) The non-porous solid support of claims 3144, 3145, 3287, 3324 or 3325, wherein said non-porous solid support comprises a plate or plates.

Claim 3331. (New) The non-porous solid support of claims 3144, 3145, 3287, 3324 or 3325, wherein said non-porous solid support comprises a well or wells, a microtiter well or microtiter wells, or a depression or depressions.

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Claim 3332. (New) The non-porous solid support of claims 3144 or 3324,  
wherein said nucleic acid is RNA.

Claim 3333. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein said nucleic acid is RNA.

Claim 3334. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein said nucleic acid comprises both DNA and RNA.

Claim 3335. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein said non-radioactive signaling moiety is a colored dye compound.

Claim 3336. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein said non-radioactive signaling moiety is a fluorogen or a fluorescent  
compound.

Claim 3337. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein said non-radioactive signaling moiety is a chemiluminescent compound.

Claim 3338. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein said non-radioactive signaling moiety comprises a chelating compound.

Claim 3339. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein said non-radioactive signaling moiety comprises an enzyme or an  
enzymatic compound.

Claim 3340. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein said non-radioactive signaling moiety comprises a coenzyme.

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Claim 3341. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein said non-radioactive signaling moiety comprises a biotin.

Claim 3342. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein a non-radioactive signal from said non-radioactive signaling moiety is  
quantifiable or detectable by spectrophotometric techniques.

Claim 3343. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein a non-radioactive signal from said non-radioactive signaling moiety is  
quantifiable or detectable by colorimetric techniques.

Claim 3344. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein a non-radioactive signal from said non-radioactive signaling moiety is  
quantifiable or detectable by fluorometric techniques.

Claim 3345. (New) The non-porous solid support of claims 3145, 3287 or 3325,  
wherein a non-radioactive signal from said non-radioactive signaling moiety is  
quantifiable or detectable by chemiluminescent techniques.

Claim 3346. (New) The system of claims 3172, 3173, 3279, 3280, 3281 or  
3282, wherein said non-porous solid support comprises a plate or plates.

Claim 3347. (New) The system of claims 3172, 3173, 3279, 3280, 3281 or  
3282, wherein said non-porous solid support comprises a well or wells, a microtiter  
well or microtiter wells, or a depression or depressions.

Claim 3348. (New) The system of claims 3172 or 3280, wherein said nucleic  
acid is RNA.

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Claim 3349. (New) The system of claims 3173, 3281 or 3282, wherein said nucleic acid comprises RNA.

Claim 3350. (New) The system of claims 3173, 3281 or 3282, wherein said nucleic acid comprises both DNA and RNA.

Claim 3351. (New) The system of claims 3173, 3281 or 3282, wherein said non-radioactive signaling moiety comprises a colored dye compound.

Claim 3352. (New) The system of claims 3173, 3281 or 3282, wherein said non-radioactive signaling moiety comprises a fluorogen or a fluorescent compound.

Claim 3353. (New) The system of claims 3173, 3281 or 3282, wherein said non-radioactive signaling moiety comprises a chemiluminescent compound.

Claim 3354. (New) The system of claims 3173, 3281 or 3282, wherein said non-radioactive signaling moiety comprises a chelating compound.

Claim 3355. (New) The system of claims 3173, 3281 or 3282, wherein said non-radioactive signaling moiety comprises an enzyme or an enzymatic compound.

Claim 3356. (New) The system of claims 3173, 3281 or 3282, wherein said non-radioactive signaling moiety comprises a coenzyme.

Claim 3357. (New) The system of claims 3173, 3281 or 3282, wherein said non-radioactive signaling moiety comprises a biotin.

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Claim 3358. (New) The system of claims 3173, 3281 or 3282, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by spectrophotometric techniques.

Claim 3359. (New) The system of claims 3173, 3281 or 3282, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by colorimetric techniques.

Claim 3360. (New) The system of claims 3173, 3281 or 3282, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by fluorometric techniques.

Claim 3361. (New) The system of claims 3173, 3281 or 3282, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by chemiluminescent techniques.

Claim 3362. (New) The array of claims 3198, 3199, 3300, 3301, 3326 or 3327, wherein said non-porous solid support comprises a plate or plates.

Claim 3363. (New) The array of claims 3198, 3199, 3300, 3301, 3326 or 3327, wherein said non-porous solid support comprises a well or wells, a microtiter well or microtiter wells, or a depression or depressions.

Claim 3364. (New) The array of claim 3198, 3199, 3300, 3301, 3326 or 3327, wherein said non-porous solid support comprises one or more hydroxyls.

Claim 3365. (New) The array of claim 3198, 3199, 3300, 3301, 3326 or 3327, wherein said non-porous solid support comprises one or more epoxides.

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Claim 3366. (New) The array of claims 3198 or 3300, wherein said nucleic acids is RNA.

Claim 3367. (New) The array of claims 3199 or 3301, wherein said nucleic acids is RNA.

Claim 3368. (New) The array of claims 3199 or 3301, wherein said nucleic acids comprises both DNA and RNA.

Claim 3369. (New) The array of claims 3199, 3301, 3326 or 3327, wherein said non-radioactive signaling moiety is a colored dye compound.

Claim 3370. (New) The array of claims 3199, 3301, 3326 or 3327, wherein said non-radioactive signaling moiety is a fluorogen or a fluorescent compound.

Claim 3371. (New) The array of claims 3199, 3301, 3326 or 3327, wherein said non-radioactive signaling moiety is a chemiluminescent compound.

Claim 3372. (New) The array of claims 3199, 3301, 3326 or 3327, wherein said non-radioactive signaling moiety is a chelating compound.

Claim 3373. (New) The array of claims 3199, 3301, 3326 or 3327, wherein said non-radioactive signaling moiety is an enzyme or an enzymatic compound.

Claim 3374. (New) The array of claims 3199, 3301, 3326 or 3327, wherein said non-radioactive signaling moiety is a coenzyme.

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Claim 3375. (New) The array of claims 3199, 3301, 3326 or 3327, wherein said non-radioactive signaling moiety is biotin.

Claim 3376. (New) The array of claims 3199, 3301, 3326 or 3327, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by spectrophotometric techniques.

Claim 3377. (New) The array of claims 3199, 3301, 3326 or 3327, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by colorimetric techniques.

Claim 3378. (New) The array of claims 3199, 3301, 3326 or 3327, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by fluorometric techniques.

Claim 3379. (New) The array of claims 3199, 3301, 3326 or 3327, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by chemiluminescent techniques.

Claim 3380. (New) The array of claim 3222 or 3223, wherein said non-porous solid support comprises one or more hydroxyls.

Claim 3381. (New) The array of claim 3222 or 3223, wherein said non-porous solid support comprises one or more epoxides.

Claim 3382. (New) The array of claim 3222, wherein said nucleic acids are RNA.

Claim 3383. (New) The array of claim 3223, wherein said nucleic acids are RNA.

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Claim 3384. (New) The array of claim 3223, wherein said nucleic acids comprise both DNA and RNA.

Claim 3385. (New) The array of claim 3223, wherein said non-radioactive signaling moiety comprises a colored dye compound.

Claim 3386. (New) The array of claim 3223, wherein said non-radioactive signaling moiety comprises a fluorescent compound.

Claim 3387. (New) The array of claim 3223, wherein said non-radioactive signaling moiety comprises a chemiluminescent compound.

Claim 3388. (New) The array of claim 3223, wherein said non-radioactive signaling moiety comprises a chelating compound.

Claim 3389. (New) The array of claim 3223, wherein said non-radioactive signaling moiety comprises an enzyme or an enzymatic compound.

Claim 3390. (New) The array of claim 3223, wherein said non-radioactive signaling moiety comprises a coenzyme.

Claim 3391. (New) The array of claim 3223, wherein said non-radioactive signaling moiety comprises a biotin.

Claim 3392. (New) The array of claim 3223, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by spectrophotometric techniques.

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Claim 3393. (New) The array of claim 3223, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by colorimetric techniques.

Claim 3394. (New) The array of claim 3223, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by fluorometric techniques.

Claim 3395. (New) The array of claim 3223, wherein a non-radioactive signal from said non-radioactive signaling moiety is quantifiable or detectable by chemiluminescent techniques.

Claim 3396. (New) The non-porous glass or non-porous plastic solid support of claims 3246 or 3247, wherein said non-porous glass or non-porous plastic solid support comprises a plate or plates.

Claim 3397. (New) The non-porous glass or non-porous plastic solid support of claims 3246 or 3247, wherein said non-porous glass or non-porous plastic solid support comprises a well or wells, a microtiter well or microtiter wells, or a depression or depressions.

Claim 3398. (New) The non-porous glass or non-porous plastic solid support of claim 3246, wherein said nucleic acid is RNA.

Claim 3399. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said nucleic acid is RNA.

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Claim 3400. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said nucleic acid comprises both DNA and RNA.

Claim 3401. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-radioactive signaling moiety comprises a colored dye compound.

Claim 3402. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-radioactive signaling moiety comprises a fluorescent compound.

Claim 3403. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-radioactive signaling moiety comprises a chemiluminescent compound.

Claim 3404. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-radioactive signaling moiety comprises a chelating compound.

Claim 3405. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-radioactive signaling moiety comprises an enzyme or an enzymatic compound.

Claim 3406. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-radioactive signaling moiety comprises a coenzyme.

Claim 3407. (New) The non-porous glass or non-porous plastic solid support of claim 3247, wherein said non-radioactive signaling moiety comprises a biotin.

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